S-C Macro Assembler

S-C Software Corporation is pleased to introduce the S-C Macro Assembler, the latest version of our most popular product. The S-C Assembler II Version 4.0 already has the reputation of being the easiest editor/assembler to learn, to remember, and to use...now the S-C Macro Assembler provides a new level of power and performance for the beginner and professional programmer alike.

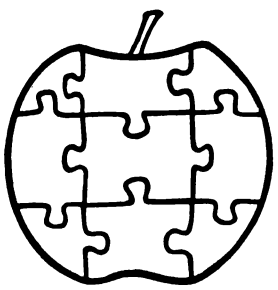
- 29 Commands, including a convenient EDIT command with 15 subcommands. COPY and REPLACE commands further simplify entry and modification of even the most complex programs.
- 20 Assembler Directives (Pseudo-Ops) provide all features necessary for professional software development, including conditional assembly and macro generation.
- Operates in any Apple II or Apple II Plus with at least 32K RAM and one disk drive. Any additional memory or disk drives will be used as required. A Language Card version is also included.
- A memory size of 48K allows source programs of over 24,000 bytes to be handled entirely within RAM. The Language Card version allows source programs of over 32,000 bytes. Much larger programs can be edited and assembled using the "INCLUDE" and "TARGET FILE" capabilities, up to the limit of online disk storage.
- Programs can be edited, assembled, and tested entirely within the framework of the S-C Macro Assembler. The editor and assembler are coresident, allowing rapid cycles of modification, reassembly, and check-out. All DOS and Apple Monitor commands are active as well, providing a familiar interface to the standard Apple features.
- Uses its own high-speed technique to store source files, but also can read or write standard TEXT files. You can EXEC in files from another assembler, use some other text editor to prepare files, keep a library of routines on disk to EXEC into any program, or use S-C Macro Assembler to prepare EXEC files for any purpose.
- Price is only $80! Includes diskette with Macro Assembler and sample programs, a 100-page Reference Manual, and a Programmer Reference Card. And the new Version 2.0 Macro Assembler (see other side) is only $100.

Commands	
Source:	NEW, LOAD, SAVE, TEXT, HIDE, MERGE
Editing:	LIST, FIND, EDIT, DELETE, REPLACE, COPY, RENUMBER
List Control:	FAST, SLOW, PRT,"
Object:	ASM, MGO, VAL, SYMBOLS
Miscellaneous:	AUTO, MANUAL, INCREMENT, MEMORY, MNTR, RST, USR

All Apple Monitor Commands
All Apple DOS Commands

Assembler Directives	
.OR	Origin
.TA	Target Address
.TF	Target File
.IN	Include File
.EN	End of Program
.EQ	Equate
.DA	1- or 2-byte Data
.HS	Hex String
.AS	ASCII String
.AT	ASCII Terminated
.BS	Block Storage
.TI	Title
.LIST	Listing Options
.PG	Page Eject
.DO, .ELSE, .FIN	Conditional Assembly
.MA	Macro Definition
.EM	End of Macro
.US	User Directive

Already well-known for excellent support, S-C Software Corporation pledges to continue development of new features, and to help owners gain the maximum benefit from the S-C Macro Assembler. In addition to telephone consultation for registered owners, a monthly newsletter is available by subscription (currently $16/year). The "Apple Assembly Line" covers items of interest to assembly language programmers at all levels, and has helped many to advance their programming skills.



"Makes assembly language programming on the Apple as easy as programming in BASIC."

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We take Master Card and Visa
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S-C Macro Assembler Version 2.0.....Bill Morgan

We are now accepting orders for the upgrade to S-C Macro Assembler Version 2.0. Here is a summary of the new features:

- The big news, of course, is the ability to assemble 65C02, 65802, and 65816 opcodes. The new .OP directive switches between the 6502, Sweet-16, 65C02, and 65816 opcode sets.

- All screen output now passes through one driver routine, which will be much easier to modify for other displays. Drivers are included for 40-column, //e and //c 80-column, and STB-80.

- Typing a Control-C at the command prompt (:) emits CATALOG, leaving the cursor at the end of the line, to add slot and drive specifiers if needed.

- There is a sort of Auto-SAVE function. Once you have created a comment line near the beginning of your source file containing the phrase "SAVE filename", typing ESC-S will emit that phrase and position the cursor at the end, so you can add a suffix or just press RETURN.

- The COPY command asks "DELETE ORIGINAL?" If you type "Y", the effect will be that of a MOVE command.

- The tape LOAD and SAVE commands have been removed, to make room for new features.

- All operand expressions are calculated to 32 bits and .DA data values may be larger, to allow for the 65816's extended addressing capabilities.

- You can force Zero Page or Absolute addressing modes by prefixing the operand with < or >.

- Operand expressions may include bitwise logical operations. &, ! (or |), and ^ are AND, OR, and EOR.

- Control-S functions as a case lock key, toggling upper/lower case entry.

- The .BS directive allows you to specify the value of the fill byte generated. This directive now creates fill bytes in assemblies into memory, rather than to disk only.

- The assembler tests for the "/" command character, to simplify use of the Laumer Research Full Screen Editor.

- All object code bytes are vectored through a standard location, so you can intercept the assembler's output for special purposes.

Registered owners of S-C Macro Assembler will be able to purchase the upgrade to Version 2.0 for only $20.00. Just send us a check or charge card number, and you will be among the first to have the new version.

With these tools you can really program!

Presenting a selection of the best programming tools for the entire Apple II family!

S-C Macro Assembler – Combined editor/assembler includes 29 commands and 20 directives; with macros, conditional assembly, global replace, edit, and more. Well-known for ease-of-use and powerful features. Thousands of users in over 30 countries and in every type of industry attest to its speed, dependability, and user-friendliness. Blends power, simplicity, and performance to provide the optimum capabilities to both beginning and professional programmers. With 100-page manual and reference card, $80. (If you own an older version, call for an upgrade price.) Version 2.0 - $100

Cross Assembler Modules – Owners of the S-C Macro Assembler may add the ability to develop programs for other systems. We have modules for most of the popular chips, at very reasonable prices:

6800/01/02	$32.50
6805	$32.50
6809	$32.50
68000	$50.00
Z-80	$32.50
PDP-11	$50.00
8048	$32.50
8051	$32.50
8080/85	$32.50
1802/04/05	$32.50

All of the cross assemblers retain the full power of the S-C Macro Assembler. You can develop programs for burning into EPROMs, transfer through a data-link, or direct execution by some of the plug-in processor cards now on the market.

Apple Assembly Line – Monthly newsletter for assembly language programmers, beginner or advanced. Tutorial articles; advanced techniques; handy utility programs; commented listings of code in DOS and Apple ROMs; reviews of relevant new books, hardware, software; and more! $18 per year (add $3 for first class postage in USA, Canada, Mexico; add $13 postage for other countries).

ES-CAPE (Extended S-C Applesoft Program Editor) – Full-function, interactive program editor for Applesoft. For painless programming and accurate entry of programs from magazines: fast, easy changes; split-screen operation; global search and replace; automatic line numbers; keyboard macros; and more! $60

Flash! – The Integer BASIC Compiler from Laumer Research. Transforms your programs into machine language so they run many times faster. Adds many new functions and features to the language, supporting hi-res graphics and more! Optional assembly source code creation for use with S-C Assembler. Requires Integer BASIC in RAM or ROM to edit source programs (not required for compiled programs). Source code of run-time package also available. Compiler, $79; run-time source, $39.

Double Precision Floating Point for Applesoft – For the scientist or engineer who is not satisfied with Applesoft's nine-digit precision. With this 2048-byte machine language extension to Applesoft, you can get 21-digit precision whenever you need it! Supports +, −, *, /, INPUT, and PRINT. Subroutines coded in Applesoft for 21-digit precision math functions (sin, cos,sqrt, log, exp, etc.) are also included. And it's fast! Only $50.

DISASM – Symbolic two-pass disassembler handles data tables, displaced object code, and includes a pre-defined symbol table of your choice. Produces ready-to-assemble source code with labels from machine code in ROM or RAM, formatted for S-C, Lisa, or ToolKit assemblers. $30.

S-C XREF – Designed to work with the S-C Macro Assember, produces a cross reference table of all labels used in your assembly source code. Only $20, or $50 with complete source code on disk.

All of our products are designed to be used. You can make back-up copies with any standard Apple disk copy program, and copies of the individual files can be moved to your working disks. We trust you.

S-C Software Corporation has frequently been commended for outstanding support: competent telephone help, continuing enhancements, and excellent upgrade policies. Call now and talk to Bob Sander-Cederlof or Bill Morgan. We want to help you program!

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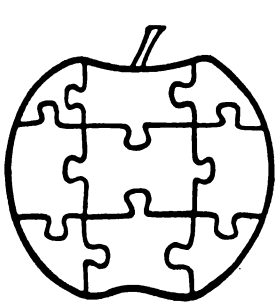

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